



MS APPEAL BRIEF - PATENTS
Docket No.: 2658-0268P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jae Yong PARK

Application No.: 09/878,401

Confirmation No.: 2192

Filed: June 12, 2001

Art Unit: 2674

For: ELECTRO-LUMINESCENCE DISPLAY

Examiner: J. T. Nguyen

APPEAL BRIEF TRANSMITTAL FORM

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an Appeal Brief on behalf of the Appellants in connection with the above-identified application.

☐ The enclosed document is being transmitted via the Certificate of Mailing provisions of 37 C.F.R. § 1.8.

A Notice of Appeal was filed on December 22, 2005.

☐ Applicant claims small entity status in accordance with 37 C.F.R. § 1.27.

The fee has been calculated as shown below:

03/23/2006 JADD01 00000007 09878401

01 FC:1402

500.00 0P

☒ Extension of time fee pursuant to 37 C.F.R. §§ 1.17 and 1.136(a) - \$120.

☒ Fee for filing an Appeal Brief - \$500.00 (large entity).

Application No.: 09/878,401

Docket No.: 2658-0268P

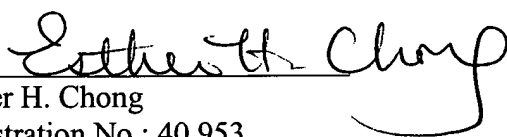
☒ Check(s) in the amount of \$620 is attached.

☐ Please charge Deposit Account No. 02-2448 in the amount of \$620. A triplicate copy of this sheet is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: March 22, 2006

Respectfully submitted,

By 
Esther H. Chong
Registration No.: 40,953
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

Attachment(s)



PATENT
2658-0268P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: PARK, Jae Yong Conf. No.: 2192
Appl. No.: 09/878,401 Group: 2674
Filed: June 12, 2001 Examiner: J. T. Nguyen
For: ELECTRO LUMINESCENCE DISPLAY

BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: March 22, 2006

Sir:

Appellant hereby appeals from the decision in the final Office Action dated June 22, 2005 finally rejecting claims 1-11.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

- I. Real Party In Interest
- II Related Appeals and Interferences
- III. Status of Claims
- IV. Status of Amendments
- V. Summary of Claimed Subject Matter
- VI. Grounds of Rejection to be Reviewed on Appeal
- VII. Argument
- VIII. Claims
- IX. Evidence
- X. Related Proceedings
- Appendix A – Claims

I. REAL PARTY IN INTEREST

The real party in interest for this application is LG. Philips LCD Co., Ltd., as evidenced by an Assignment recorded on June 12, 2001 at Reel 011891, Frame 0956.

II. RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge, there are no other prior or pending appeals of this application, or patent interference proceedings, or judicial proceedings which may be related to, directly affect, or be directly affected by, or have a bearing on the Board's decision of this Appeal.

III. STATUS OF CLAIMS

In the application on appeal, claims 1-11 are pending. Claims 1 and 11 are independent. Claims 1-11 are rejected and are on appeal.

IV. STATUS OF AMENDMENTS

The Amendment under 37 CFR 1.111, filed on February 1, 2005, has been entered. The status of the claims is correctly stated in that Amendment.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Claims 1 and 11 are the two independent claims.

Claim 1 is directed to an electro luminescence display, comprising an electro-luminescence panel, e.g., EL panel 50, having a first face including a display area, e.g., the bottom face of panel 50 from which the visible light is emanating as shown in Fig. 7, and an opposite face having a non-display area, e.g., the top face shown in Figs. 7-9; driving circuit boards, e.g., elements 52, for applying driving signals to a gate line and a data line provided on the opposite face having the non-display area, e.g., top face shown in Figs 7-9, of the electro-luminescence panel, e.g., 50; and tape carrier packages, e.g., elements 70, connecting the driving circuit boards, e.g., elements 52, and the electro-luminescence panel, e.g., 50, in a planar state, e.g., as shown in Figs., 7-9.

Claim 11 is directed to an electro-luminescence display, comprising an electro-luminescence panel, e.g., EL panel 50, having a display area, e.g., the bottom face of panel 50 from which the visible light is emanating as shown in Fig. 7, on one surface and a non-display area, e.g., the top face shown in Figs. 7-9, on an opposite surface; driving circuit boards, e.g., elements 52, for applying driving signals to a gate line and a data line provided on the non-display area, e.g., the top face shown in Figs. 7-9, of the opposite surface of the electro-luminescence panel; and tape carrier packages, e.g., elements 70,

disposed solely on the non-display area, e.g., the top face shown in Figs. 7-9, of the opposite surface of said panel and connecting the driving circuit boards and the electro-luminescence panel in a planar state, e.g., as shown in Figs. 7- 9.

VI. GROUND OF REJECTION

A. The Office Action rejects claims 1-11 under 35 USC § 103(a) as unpatentable over U.S. Patent 6,774,8972 to Kawada et al. (hereinafter, "Kawada"). The Office Action alleges that Kawada discloses all claimed features, except that Kawada does not "specifically teach the tape carrier packages connecting the driving boards and the electroluminescence panel in a planar state." To remedy this admitted deficiency, the Office Action concludes that "it would have been obvious to minimize the size of the heat sink block to provide a display that is capable of being made having a small thickness."

VII. ARGUMENT

During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444(Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788(Fed. Cir. 1984). This burden can be satisfied when the PTO presents evidence, by means of some teaching, suggestion or inference

either in the applied prior art or generally available knowledge, that would have appeared to have suggested the claimed subject matter to a person of ordinary skill in the art or would have motivated a person of ordinary skill in the art to combine the applied references in the proposed manner to arrive at the claimed invention. See Carella v. Starlight Archery Pro Line Co., 804 F.2d 135, 140, 231 USPQ 644, 647 (Fed. Cir. 1986); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); In re Rinehart, 531 F.2d 1048, 1051-1052, 189 USPQ 143, 147 (CCPA 1976).

If the PTO fails to meet this burden, then the applicants is entitled to the patent. However, when a *prima facie* case is made, the burden shifts to the applicant to come forward with evidence and/or argument supporting patentability. Patentability *vel non* is then determined on the entirety of the record, by a preponderance of evidence and weight of argument, In re Ochiai, cited above.

Because the rejection is based on 35 U.S.C. § 103, what is in issue in such a rejection is "the invention as a whole", not just a few features of the claimed invention. Under 35 U.S.C. § 103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

to which said subject matter pertains." The determination under section 103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the Examiner must explain what the differences between the claimed invention and the prior art are and provide objective factual evidence to support a conclusion that it would be obvious to one of ordinary skill in the art to achieve the claimed invention, which includes those missing features.

In rejecting claims under 35 U.S.C. § 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. E-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins &

Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Eritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office Action must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

This rejection is improper and should be reversed for a number of reasons.

In the first place, the Office Action presents no objective factual evidence or reasoning to support the speculative conclusion that it would have been obvious to minimize the size of the heat sink block of Kawada to provide a display that is capable of being made having a small thickness. For that reason alone, it is improper.

In the second place, plasma display panels, including that of Kawada, are normally of a relatively small thickness, and there is no objective factual evidence of record presented to show that one of ordinary skill in the art would be properly motivated to make Kawada's display panel smaller than it is.

In the third place, even if it were shown (which it has not been) that it would be obvious to make Kawada's plasma display panel to have a smaller thickness, there is no objective factual evidence of record presented to make it smaller by providing a claimed feature that is admittedly missing from Kawada,

i.e., providing tape carrier packages connecting the driving circuit boards and the panel in a planar state.

Appellant respectfully submits that because Kawada does not disclose such a planar state feature, and because no objective factual evidence has been provided to show such a feature, the rejection is based on improper speculation and/or improper hindsight reconstruction of Appellant's claimed invention based solely on Appellant's disclosure.

In reply to the aforementioned arguments, which were presented in the Amendment filed on February 1, 2005, the final Office Action states that (1) Kawada discloses, in Fig. 4C, the tape carrier packages 21a' connecting the driving circuit boards 23 mounted on heat sink block 26 of the electroluminescence panel 11; and (2) Fig. 2, the prior art portion of Kawada, discloses the driving circuit board 23 mounted on the non-display substrate 11, wherein there is no heat sink block. Then, the Examiner concludes "it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the driving circuit board is [sic] mounted on the non-display substrate without the heat sink block as taught by prior art Fig. 2, in the system of Kawada in order reduce [sic] the thickness for the display."

Appellant respectfully disagrees with these arguments, including this conclusion of obviousness, for a number of reasons.

First, in Fig. 4C, Kawada's driving circuit board 23 is not provided on an electroluminescence panel substrate. Rather, it is shown as being attached to the bottom of heat sink 26, and is not located on either panel substrate 11 or 15. Moreover, Kawada explicitly discloses that an object of their invention is to successfully avoid the problem of heat dissipation that arises in high resolution flat display devices in which the driver integrated chips have to be mounted with large density by forming the driver integrated circuits on a heat sink block. See col. 3, lines 40-49.

Second, Kawada teaches away from using prior art electroluminescence panels of its Fig. 2 because of a number of problems disclosed and discussed in columns 2 and 3 of Kawada. In other words, Kawada teaches away from modifying its Fig. 4C, because to do so would remove the benefits associated with Fig. 4C, which includes a heat sink, and which is disclosed by Kawada as an improvement over the device of Fig. 2. In this regard, see Kawada's "Summary of the Invention" in columns 3 and 4 of Kawada, which point out that by using a heat sink, the efficiency of heat dissipation of prior art electroluminescence panels is "improved substantially" and the problem of heat dissipation of prior art electroluminescence panels is "successfully avoided." In view of these explicit teachings by Kawada, Appellant respectfully submits that one of ordinary skill in the art would have no incentive to do away with Kawada's heat sink "to incorporate the driving circuit board is [sic] mounted on

the non-display substrate without the heat sink block as taught by prior art Fig. 2, in order reduce [sic] the thickness for the display,” as suggested in the final Office Action.

Third, Kawada discloses at least four separate versions of their invention, some of which are thinner than others. In fact, the three versions shown in Figs, 4A, 4B and 4C are all thinner than the prior art embodiment relied on in the rejection, i.e., the version shown in Fig. 2. So, if one of ordinary skill in the art wanted a thinner version of the invention shown in Fig. 4 C, he or she can turn to Figs. 4A, 4B or 4C, none of which discloses or suggests the claimed invention, which includes a combination of features including tape carrier packages connecting the driving circuit boards and the electro-luminescence panel in a planar state.

Fourth, the Office Action never provides any detail of how its counter-intuitive proposed modification of Kawada, that removes the heat sink from Fig. 4C, would result in, or render obvious, the claimed invention which is a combination of features including tape carrier packages connecting the driving circuit boards and the electro-luminescence panel “in a planar state.” Actually, Fig. 4 shows a tape carrier package arrangement that has a U-shape, rather than a planar shape, and the Office Action does not explain, in terms of objective factual evidence, what will motivate one of ordinary skill in the art to achieve the recited “planar state.”

Because Kawada does not have the recited planar state and the Office Action fails to present any objective factual evidence that would motivate a skilled worker to modify Kawada to achieve the recited planar state, Appellant can only conclude that the rejection is based on impermissible speculation or impermissible hindsight reconstruction of the claimed invention based solely on Applicant's disclosure.

Accordingly, this rejection of claims 1-10 as unpatentable over Kawada is improper and should be withdrawn.

Reconsideration and reversal of this rejection are respectfully requested.

VII. CLAIMS

Appellant respectfully submits that claims 1-11 are patentable over the applied art and that all of the rejections of record should be reversed. These claims are duplicated in Appendix A attached hereto.

IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the Examiner is being submitted.

Application No.: 09/878,401
Art Unit 2674

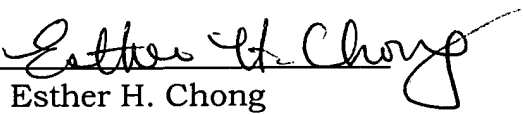
Attorney Docket No. 2658-0268P
Brief on Appeal
Page 13 of 17

X. RELATED PROCEEDINGS APPENDIX

No related proceedings are referenced in II above. Therefore, copies of decisions in related proceedings are not provided.

Dated: March 22, 2006

Respectfully submitted,

By 
Esther H. Chong
Registration No. 40953

BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road, Suite 100 East
P.O. Box 747 Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

EHC/RJW:mmi/vd

Attachment: APPENDIX A - CLAIMS

APPENDIX A – CLAIMS

1. (Previously Presented) An electro luminescence display, comprising:

an electro-luminescence panel having a first face including a display area and an opposite face having a non-display area;

driving circuit boards for applying driving signals to a gate line and a data line provided on the opposite face having the non-display area of the electro-luminescence panel; and

tape carrier packages connecting the driving circuit boards and the electro-luminescence panel in a planar state.

2. (Original) The electro-luminescence display according to claim 1, wherein the driving circuit boards include:

a gate driving circuit for applying driving signals to the gate lines; and

a data driving circuit for applying driving signals to the data lines.

3. (Original) The electro-luminescence display according to claim 1, wherein the driving circuit boards include a plurality of output pads electrically connected to the tape carrier packages.

4. (Original) The electro-luminescence display according to claim 3,

wherein the electro-luminescence panel includes a plurality of input pads that are provided at the non-display area and electrically connected to the tape carrier packages.

5. (Original) The electro-luminescence display according to claim 4, wherein each of the tape carrier packages includes:

first pads connected to the output pads of the driving circuit boards; and
second pads connected to the input pads of the electro-luminescence display.

6. (Original) The electro-luminescence display according to claim 2, wherein the tape carrier packages include:

a first group of tape carrier packages arranged between the electro-luminescence panel and the gate driving circuit; and

a second group of tape carrier packages arranged between the electro-luminescence panel and the data driving circuit.

7. (Original) The electro-luminescence display according to claim 1, wherein each of the tape carrier packages has a first side for connecting the driving circuit boards to the electro-luminescence panel and a second side for holding a computer chip.

8. (Original) The electro-luminescence display according to claim 7, wherein a substantial portion of each of said tape carrier packages is in a common plane with said driving circuit boards.

9. (Original) The electro-luminescence display according to claim 7, wherein a substantial portion of each of said tape carrier packages having a first portion disposed in a common plane with said driving circuit boards and connected to the electro-luminescence panel.

10. (Original) The electro-luminescence display according to claim 9, wherein each of said tape carrier packages has a second portion disposed in a contiguous plane to the common plane of said electro-luminescence panel and said first portion.

11. (Previously Presented) An electro-luminescence display, comprising:
an electro-luminescence panel having a display area on one surface and a non-display area on an opposite surface;

driving circuit boards for applying driving signals to a gate line and a data line provided on the non-display area of the opposite surface of the electro-luminescence panel; and

tape carrier packages disposed solely on the non-display area of the opposite surface of said panel and connecting the driving circuit boards and the electro-luminescence panel in a planar state.